PAPINASHVILI, K.I.;LOMINADZE, V.P., red.; VAYTSMAN, A.I., red.; NIKOLAYEVA, G.S., tekhn.red.

[Atmospheric processes in Transcaucasia and their connection with large-scale circulation processes above Eurasia] Atmosfernye protsessy v Zakavkaz'e i ikh sviaz' s makrotsirkuliatsionnymi protsessami nad Evraziei. Leningrad, Gidrometeoizdat, 1963. 183 p. (MIRA 16:8)
(Eurasia--Atmosphere) (Transcaucasia--Atmosphere)

ORLOVA, Valentina Vladimirovna; POKROVSKAYA, T.V., otv. red.; VAYTSMAN, A.I., red.; ALEKSEYEV, A.G., tekhn. red.

[Western Siberia]Zapadnaia Sibir'. Leningrad, Gidrometeoizdat, 1962. 359 p. (Klimat SSSR, no.4) (MIRA 15:9)
(Siberia, Western--Climate)

SHCHERBAKOVA, Yelena Yakovlevna; POKROVSKAYA, T.V., otv. red.; VAYTSMAN, A.I., red.; BRAYNINA, M.I., tekhn. red.

[Eastern Siberia] Vostochnaia Sibir'. Leningrad, Gidrometeor. izd-vo, 1961. 300 p. (Klimat SSSR, no.5) (MIRA 15:1)
(Siberia, Eastern--Climate)

GRUZA, Georgiy Vadimovich; PETROSYANTS, M.A., red.; VAYTSMAN, A.I., red.; SERGEYEV, A.N., tekhn. red.

[Large-scale turbulence in general atmospheric circulation] Makroturbulentnost' v obshchei tsirkuliatsii atmosfery. Pod red. M.A. Petrosiants. Leningrad, Gidrometeorologicheskoe izd-vo, 1961. 102 p. (MIRA 14:10)

(Atmospheric turbulence)

ANAPOL'SKAYA, Liya Yevseyevna; POKROVSKAYA, T.V., otv. red.; VAYTSMAN, A.I., red.; BRAYNINA, M.I., tekhn. red.

[Wind velocity conditions in the U.S.S.R.] Rezhim skorostei vetra na territorii SSSR. Leningrad, Gidrometeor. izd-vo, 1961. 198 p. (MIRA 15:5)

(Winds)

BABKOV, Ivan Ivanovich; VAYTSMAN, A.I., red.; SOLOVEYCHIK, A.A., tekhn. red.; BRAYNINA, M.I., tekhn. red.

[Climate of the Crimea]Klimat Kryma. Leningrad, Gidrometeoizdat, 1961. 87 p. (MIRA 15:8)
(Crimea—Climate)

BALASHEVA, Yelena Nikolayevna; KARAUL'SHCHIKOVA, Nina Nikolayevna; SABININA Irina Georgiyevna; SEMENOVA, Ol'ga Aleksandrovna; KOZIK, S.M., red.; VAYTSMAN, A.I., red.; SERGEYEV, A.N., tekhn. red.

[Climatological description of Surkhan-Darya Province]Klimaticheskoe opisanie Surkhan-Dar'ianskoi oblasti. [By]E.N. Balasheva i dr. Leningrad, Gidrometeoizdat, 1962. 114 p. (MIRA 15:10)

(Surkhan-Darya Province--Climate)

KOZIK, Stefan Mikhaylovich; MASHUKOV, P.M., kand. fiz.-mat. nauk, red.; VAYTSMAN, A.I., red.; BRAYNINA, M.I., tekhn. red.

[Calculation of the movement of avalanches]Raschet dvizheniia snezhnykh lavin. Pod red. P.M.Mashukova. Leningrad, Gidrometeoizdat, 1962. 74 p. (MIRA 15:9)
(Avalanches)

ORLOVA, Valentina Vladimirovna; POKROVSKAYA, T.V., otv. red.; VAYTSMAN, A.I., red.; ALEKSEYEV, A.G., tekhn. red.

[Climate of the U.S.S.R.]Klimat SSSR. Leningrad, Gidrometeoizdat. No.4.[Western Siberia]Zapadnaia Sibir'. 1962. 359 p. (MIRA 15:8)

1. Leningrad. Glavnaya geofizicheskaya observatoriya.
(Siberia, Western--Climate)

EYGENSON, Moris Semenovich[deceased]; SHNITNIKOV, A.V., prof., otv. red.; VAYTSMAN, A.I., red.; IVKOVA, G.V., tekhn. red.

[Sun, weather, and climate] Solntse, pogoda i klimat. Leningrad, Gidrometeoizdat, 1963. 273 p. (MIRA 16:11)
(Solar radiation)

BAYDAL, Mikhail Kharlampiyevich; VAYTSMAN, A.I., red.

[Long-range forecasting of the weather and climatic fluctuations in Kazakhstan] Dolgosrochnye prognozy pogody i kolebanii klimata Kazakhstana. Leningrad, Gidrometeoizdat. Pt.3. 1965. 361 p. (MIRA 18:12)

AVER'YANOV, A.G.; VAYTSMAN, P.S.; GAL'PERIN, Ye.I.; ZVEREV, S.M.; ZAYONCHKOVSKIY, M.A.; KOSMINSKAYA, I.P.; KRAKSHINA, R.M.; NIKIOTA, G.G.; TULINA, Yu.V.

Deep seismic sounding in the transition zone between the continent of Asia and the Pacific Ocean during the International Geophysical Year. Izv. AN SSSR. Ser. geofiz. no. 2:169-184 F '61. (MIRA 14:2)

1. Institut fiziki Zemli AN SSSR.
(Soviet Far East--Seismometry)
(Earth--Surface)

DAVID, Rudol'f Eduardovich, akademik (1887-1939); KULIK, M.S., otv. red.; VAYTSMAN, A.I., red.

[Selected works on agricultural meteorology] Izbrannye raboty po sel'skokhoziaistvennoi meteorologii. Leningrad, Gidrometeoizdat, 1965. 225 p. (MIRA 18:7)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for David).

VAYTSMAN, V.M.

91-58-7-6/27

AUTHORS: Dutikov, S.S.; Shevelev, A.A.; Vaytsman, V.M., Engineers and Vnukov, A.K., Candidate of ~~Technical~~ Sciences

TITLE: Exchange of Experience(Obmen opytom). The Automated Operation of Mills(Avtomatizatsiya raboty mel'nits).

PERIODICAL: Energetik, 1958, Nr 7, pp 19-20 (USSR).

ABSTRACT: In 1957, 5 drum ball mills (4 mills of "Sh-16" type and 1 biconical mill of "ShK-25" type) were automated according to the design suggested by Yuzhnoye otdeleniye ORGRES (the "ORGRES" South Branch Office). The following equipment was utilized: electronic controllers of "ER-III" type on 2 mills and electomechanical direct feedback columns of the "Energodetal' " plant on 3 mills. Their structural details and operation are described. The first experimental service of this automated system proved its operational stability and wide control range, as well as easy maintenance. The various requirements to be met for automating mills, such as good dust system, continuous aeration etc. are

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outlined. The "dust level" automation of mills must guarantee a decrease in consumption of electric energy for the preparation of pulverized coal by 3 to 4 kwh per ton of milling. There are 2 diagrams.

1. Ball mills--Operation 2. Ball mills--Electronic controls

VAYTSMAN, V.M.,inzh.; VNUKOV, A.K.,kand.tekhn.nauk; MARKIN, V.P.,inzh.

Automation of the charging of fuel into ball mills. Elek.sta.29 no.3:85 Mr '58. (MIRA 11:5)
(Pulverizers)

VAYTSMAN, V.M., inzh.

Introduction of TP-13 boilers. Energetik 8 no.8:10-13 Ag '60. (MIRA 13:10)

(Boilers) (Steam power plants)

VAYTSVAYG, N.K.

Koreiskaia narodno-demokratiche-
skaia respublika (Korean People's Democratic Republic)
Moskva, Izd. Akad. nauk SSSR, 1954. 447 p.

SO: Monthly List of Russian Accessions, Vol. 7, No. 5, August 1954

BALEK, A. [Bálek, Alexej]; DANEK, S. [Daněk, Stanislav], inzh.; FOFF, A. [Foff, Arthur], inzh.; KOLVODA, Ya. [Kolvoda, Jan], doktor; SHMID, Y. [Schmid, Josef], inzh.; ŠKVOR, I. [Škvor, J.], doktor; VAYTTS, A. [Waitz, Antonín], inzh.; ROMASHKIN, N.I. [translator]; VEKSHIN, G.K. [translator]; TKACHEVA, T.K. [translator]; OSTROUMOVA, V.S., red.; SEMENOVA, N.Kh., red.; KAPRALOVA, A.A., tekhn.red.

[General inventory of fixed assets in Czechoslovakia] General'naia inventarizatsiia osnovnykh fondov v Chekhoslovakii. Moskva, Gos. statist.izd-vo, 1959. 101 p. (MIRA 13:2)
(Czechoslovakia--Inventories)

GROMADCHENKO, A., gorod shakhty, Rostovskoy oblasti; GAPONOV, S., predsedatel', gorod Rudnya, Smolenskoy oblasti; VAYTULEVICH, F., Leningrad; BONDAREV, A., predsedatel', Melovatskiy rayon, Voronezhskoy oblasti.

From the editor's mail. Voen.znan. 29 no.9:7 S '53. (MLRA 6:12)

1. Rayonnyy orgkomitet Vsesoyuznogo dobrovol'nogo obshchestva sodeystviya aviatsii (for Gaponov). 2. Rayonnyy orgkomitet Vsesoyuznogo dobrovol'nogo obshchestva sodeystviya aviatsii (for Bondarev). (Military education)

VAIURIB, E. A.

Energy distribution of photoelectrons. 1. Oxygen-silver-cesium cathode. Yu. M. Kushmir, E. A. Vaiurib and V. P. Goncharov. J. Tech. Phys. (U. S. S. R.) 9, 2139-46(1939).- Current-voltage curves of 3 cathodes were detd. for various wave lengths λ. When the intensity of irradiation is adjusted so as to make the current strength at satn. independent of the λ, the curves appear to be shifted to higher voltages when λ increases from 5000 to 10,500 Å. For the explanation it is suggested that, with increasing λ, the relative no. of electrons which cannot leave the cathode without an external field rises as also does the intensity of the external field required.

J. J. Bikerman

MIILER, T. [Millers,T.]; KARLSON,K. [Karlsons,K.]; VAYVAD, A. [Vaivads,A.]

Frost resistance of carbonated sand-lime products with unslaked dolomitic lime [with summary in English]. Vestis Latv ak no.12: 35-40 '61.

1. Akademiya nauk Latviyskoy SSR, Institut khimii

KONSTANT, Z.A.; VAYVAD, A.Ya. [Vaivads, A.]

Device for measuring X-ray patterns. Zav.lab. 30 no.4:439-440 '64.
(MIRA 17:4)

1. Institut khimii AN Latviyskoy SSR.

EYDUK, Yu.Ya. [Eiduks, J.]; VAYVAD, A.Ya. [Vaivads, A.]; FREYDENFEL'D, E.Zh. [Freidenfeld, E.]

Physicochemical properties of α- and β- calcium sulfate semihydrates. Izv.vys.ucheb.zav.; khim.i khim.tekh. 2 no.6:920-925 '59. (MIRA 13:4)

1. Rizhskiy politekhnicheskiy institut. Kafedra neorganicheskoy khimicheskoy tekhnologii.
(Calcium sulfate)

VAYVADE,A.[Vaivade,A.](Riga); LEPIN',L.[Liepina,L.](Riga)

Effect of temperature on the speed of aluminum oxidation in water and water solutions of neutral salts. I.Corrosion of aluminum in potassium chloride solutions under static conditions. In Russian.(To be continued) Vestis Latv ak no.5:89-96 '60. (EEAI 10:7)

1. Akademiya nauk Latviyskoy SSR, Institut khimii.
(Aluminum) (Solutions) (Water) (Salts)
(Corrosion and anticorrosives) (Potassium chloride)

VAYVADE, A.[Vaivade, A.](Riga); LEPIN', L.[Liepina, L.](Riga)

Effect of temperature on the speed of aluminum oxidation in water and water solutions of neutral salts. II. Corrosion of aluminum in potassium sulfate solutions under static conditions. Vestis Latv ak no.6:81-84 '60.

(EEAI 10:9)

1. Akademiya nauk Latviyskoy SSR, Institut khimii.

(Aluminum) (Potassium sulfate) (Water)
(Salts) (Corrosion and anticorrosives)

L 43092-65 EWP(e)/EWT(m)/EWP(t)/EWP(b) Pc-4 WH
ACCESSION NR: AR5006825 S/0081/65/000/001/B059/B059

15
B

SOURCE: Ref. zh. Khimiya, Abs. 1B434

AUTHOR: Berzin', R.Ya.; Sedmal, U.Ya.; Vayvad, A.Ya.

TITLE: Physicochemical studies on aluminosilicophosphate glass. II. Crystallizing ability of glass of the system RO - alumina - silica - phosphorus pentoxide

CITED SOURCE: Izv. AN LatvSSR, Ser. khim., no. 6, 1963, 663-669

TOPIC TAGS: glass, glass crystallization, aluminosilicate glass, aluminophosphate glass, magnesia, calcium oxide, phosphorus pentoxide, calcium phosphate, aluminum phosphate

TRANSLATION: The authors studied the crystallizing ability of glass of the system MgO - CaO - [illegible] crystallizing ability in glass with SiO_2 1.7-2.3 P_2O_5/Al_2O_3 =

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L 43092-65
ACCESSION NR: AR5006825

the crystallization of these types of glass results mainly in the separation of Ca and Al phospnates. For Part I, see RZhKhim, 1963, 6M72. Authors' abstract.

SUB CODE: MT ENCL: 00

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Card 2/2

L 44591-66 EWT(m)/EWP(j) IJP(c) RM

ACC NR: AP6015677 (A) SOURCE CODE: UR/0413/66/000/009/0077/0077

24
B

INVENTOR: May, L. A.; Vayvad, A. Ya.; Lagzdyn', E. A.; Tserin'sh, O. K.

ORG: none

TITLE: Preparation of emulsion of organosilicon resins. Class 39, No. 181298

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 77

TOPIC TAGS: emulsion, organosilicon resin

ABSTRACT: This Author Certificate introduces a method of preparing emulsions of organosilicon resins by hydrolysis of alkyl(aryl)chlorosilanes with a mixture of water and solvents. To enhance water resistance and antiadhesive properties, both polar and nonpolar organic solvents are suggested. The polar organic solvents include acetone, acetonitrile, and alcohol, while the nonpolar solvents include toluene, carbon tetrachloride, and 1, 2-dichloroethane. [Translation] [LD]

SUB CODE: 11/ SUBM DATE: 10Jun64/

Card 1/1 UDC: 678.84.02:66.093.8:547.1' 113' 128

1. LIYEPINA, L.: OSE, Z.: STIPRAYS, A.: VAYVADE, A.

2. USSR (600)

4. Corrosion and Anticorrosives

7. Colloid-chemical phenomena on the surface of metals and inhibition of corrosion of salt solutions. Latv. PSR Zin.Akad.Vestis, no. 8, 1951.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

VAIVADS, A. and LIEPINA, L.

"Colloid-Chemical Phenomena on Metal Surfaces, and the Inhibition of Corrosion in Salt Solutions," Part 3, Latv. PSR Zin. Akad. Vestst, No.2, 1951

VAYVADE, A. Ya.

Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
Inorganic Chemistry

Basic salts of aluminum (according to data of potentiometric titration). Ya. E. Levin and A. Ya. Vaivade (Latvian State Univ., Riga). *Zhur. Fiz. Khim.* 27, 217–32 (1953).—Solns. of $AlCl_3$, $Al(NO_3)_3$, and $Al_2(SO_4)_3$ of various concns. were titrated with KOH soln. at the time of prepn. and after periods of aging up to 15 days. The titration curves for the chloride and nitrate solns. become more neutral upon aging, while those for the sulfate do not change with time. The changes are caused by formation of various polyhydroxy, polyanion, and similar complexes.
J. W. Loveberg, Jr.

7-15-59

VAYVADE, A. Ya. In Latvian

VAYVADE, A. Ya. -- "Variation of the pH and its Significance in the Corrosion of Metals in Salt Solutions." Latvian State U, 1954. (Dissertation for Degree of Candidate of Chemical Sciences) In Latvian

SO: Izvestiya Ak. Nauk Latviyskoy SSR, No. 9, Sept., 1955

VAIVADE A

Colloid-chemical phenomena on the surfaces of metals and retardation of corrosion in salt solutions. VIII. Corrosion of aluminum and iron as a function of the concentration of solution. L. Liepiņa, A. Vaivade, Z. Ošis, and A. Stiprais (Inst. Chem., Acad. [illegible] S.S.R., Riga, Latvia). *Latvijas PSR Zinātņu Akad. Vēstis* 1954, No. 3 (Whole No. 80), 107-13 (in Russian); cf. *C.A.* 47, [illegible] [illegible] 0.001-3.N KCl at 20°, the long-range (50 days) corrosion rate of Al follows the equation $\Delta g = kc^{\alpha}$, where g is the wt. loss, c concn. of KCl and k and α are consts., e.g. [illegible]8 and 0.43, resp. Similar relations hold for Al and K sulfate solns., but here the corrosion is slower. In shorter exposures, e.g. 15 days in KCl, this law is not obeyed and a max. corrosion rate is observed at 1.N concn. An explanation for the equation is proposed: at higher concns. of Cl^-, the polyoxychlorides, formed probably through the intermediate steps of adsorption on the primary hydroxide (boehmite) and ion exchange, peptize the primary hydroxide deposits; in dil. solns., the primary boehmite passes into the less reaction-active bayerite and hydrargillite which block the surfaces and slow down the corrosion. Resemblance between the above equation and relations expected from the adsorption isotherm and mass-action law are pointed out. In the corrosion of Fe, the short time corrosion is higher in the more dil. solns. [illegible] chlorides and sulfates of the alk. and alk. earth [illegible] were investigated. In long-time tests, [illegible] max. [illegible] 0.01 N solns. [illegible] blocking of the [illegible] by an [illegible] of the positively charged colloidal particles [illegible] hydroxide primary and secondary corrosion products. [illegible] are explained by changes in the rates of [illegible] of the secondary corrosion products [illegible] The relative amts. of the latter in the [illegible] with the diln. of the electrolyte. The [illegible] by a reaction of the bivalent Fe ions with the secondarily formed (by oxidation) trivalent hydroxide [illegible] Drazniek[illegible]

VAIVADS, A.

USSR

Colloid-chemical phenomena on surfaces of metals and retardation of corrosion in salt solutions. IX. Corrosion of lead in neutral solutions of potassium salts. A. Vaivads and L. Liepiņa. *Latvijas PSR Zinātņu Akad. Vestis* 1954, No. 8 (Whole No. 85), 119–29 (in Russian; Latvian summary, 130); cf. *C.A.* 48, 9300*f*.—Corrosion of Pb was investigated in 0.0001–2*N* solns. of K salts at 20°. In KCl, the corrosion rate increased with concn. to a max. in 0.05*N* soln., decreased at a higher concn., and increased again in 2*N* soln. The first stage of corrosion was slow and proceeded with formation of adherent whitish films. After 1–3 days, cryst. and loosely attached products appeared, the adherence diminished, and the corrosion accelerated. The primary corrosion product was $PbCl_2$, while the secondary product was tentatively identified, by comparison with results of potentiometric titrations, as $PbCl_2.2Pb(OH)_2$. During corrosion, pH increased to a max. (9 in 2*N* KCl), then decreased to a steady value. In KBr, the adherence persisted through all expts., and the corrosion rate increased with concn. This is explained by anodic adsorption of negatively charged colloidal particles of $PbBr_2$, and negligible formation of secondary corrosion products, as evidenced by absence of a max. in the pH-time curve. In KI, corrosion at concns. up to 0.1*N* was very slow, but became fast in 2*N* soln. because films of the corrosion products were attacked with formation of sol. $KPbI_3$. The pH in dil. soln. stabilized at 6.5–6.6. In KNO_3, corrosiveness increased with concn. to a max. in 0.001*N* soln. Below this concn., the products were whitish and yellow, $Pb(OH)_2$, slowly changing to PbO at pH 10.5–10.8. These products adhered poorly to the surface of Pb.

VAIVADS, A.

At higher concn., the yellow products were absent, the adherence was much better, and corrosion slower. Here, at pH 8.2-8.4, the product was $Pb(NO_3)_2.5Pb(OH)_2$. In K_2SO_4, corrosivity increased with concn. The first films of corrosion products were amorphous and adherent, but within several days cryst. products developed, destroying the continuity of the film. Duration of the first stage decreased with concn. The relative corrosivities were: below 0.06*N*, KNO_3 > KCl > KBr ≥ K_2SO_4 > KI; above 0.06*N*, KI ≥ KNO_3 > KCl > KBr ≥ K_2SO_4. In general, in corrosion of Pb as compared with Al and Fe in the same solns., first amorphous corrosion products transformed into the less dispersed cryst. form sooner. Andrew Dravnieks

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VAIVADS A.

USSR

Colloid chemical phenomena at surfaces of metals and retardation of corrosion in salt solutions. XI. Kinetics of iron corrosion in solutions of chlorides and sulfates of alkali and alkaline earth metals under static conditions. L. Liepina and A. Vaivads. *Latvijas PSR Zinātņu Akad. Vēstis* 1954, No. 8 (Whole No. 85), 129-41 (in Russian; Latvian summary, 141-2); cf. C.A. 48, [illegible]. -Corrosion of common steel immersed at 20° in H_2O and in 0.0001-2N solns. of several electrolytes was observed for periods of several weeks. Wt. losses and the amts. of products adhering (I) to the specimens were detd. The initial corrosion rate decreased after 1-2 days of corrosion and remained const. for the rest of the tests. In KCl, NaCl, K_2SO_4, and $MgSO_4$, the rate [illegible] In $MgCl_2$ and [illegible] was [illegible] in the range of [illegible] The amt. of I decreased as the corrosion rate decreased with concn. The pH of solns. in all cases increased rapidly during the test by 0.5-1.0 pH units, and then stabilized at 6.6-7.0. However, in Mg and Ca salt solns. above 0.01 N, pH decreased and stabilized at 6.0. In the products of corrosion, Fe_3O_4 (II) and γ-FeO(OH) (III) were found. Amts. of II in products decreased with concns. of electrolytes. The pH of the solns. during the corrosion corresponded to the stability region of III. Since III forms at some distance from the steel surface, the degree of retardation of corrosion by this product is relatively low. The adherent films of III are built up by electrophoresis of colloid particles of III; the particles are positively charged, as was shown by dyeing expts., and therefore they migrate towards and [illegible] cathodic areas. In concd. (>0.01 N) $MgCl_2$, corrosion products contained $Mg(FeO_2)_2$. This may explain the peculiar pH change in corroding solns. of $MgCl_2$. Ca ferrite was not found in the products of corrosion in $CaCl_2$.

Andrew Dravnieks

VAYVADE, A. YA.

USSR/Chemistry

Card 1/1

Author : Lepin', L. K. and Vayvade, A. Ya.

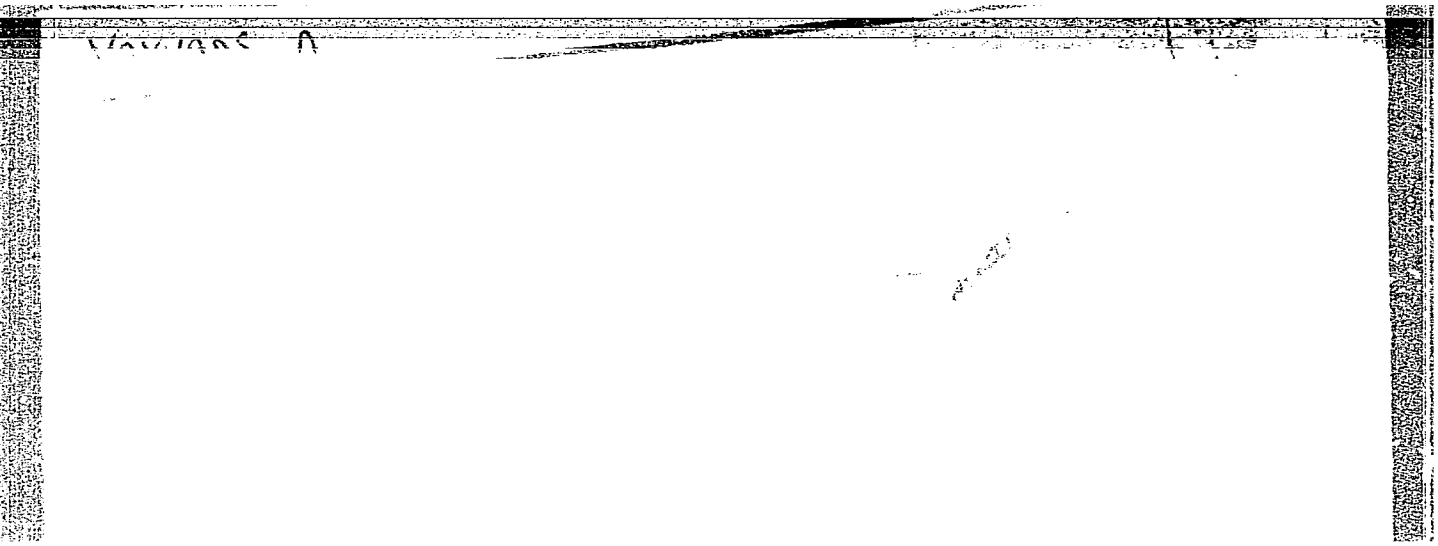
Title : Dependence of the rate of iron corrosion upon the pH of the salt (KCl) solution

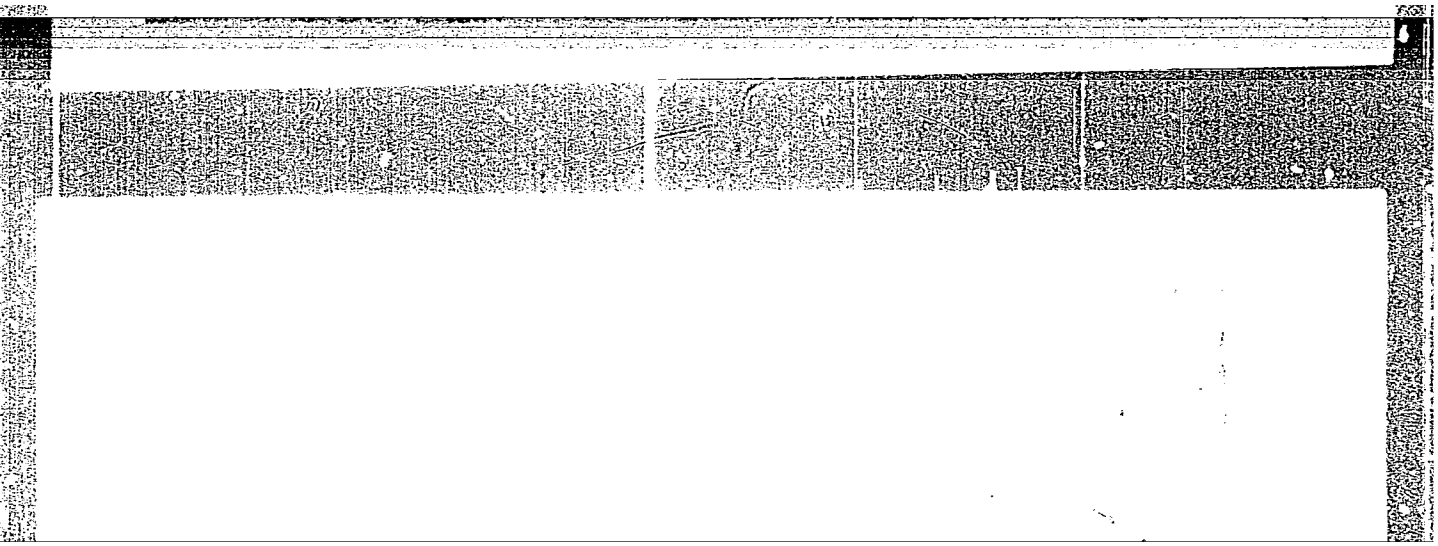
Periodical : Zhur. Fiz. Khim. 28, Ed. 3, 435-439, March 1954

Abstract : The rate of iron corrosion in KCl solutions was investigated in static conditions at initial pH values of from 3.0 to 9.0. The rate of iron corrosion under such conditions and during a constant salt concentration is determined by the stationary pH value which in the solution. In all solutions with a pH_0 of 4-9 the pH value is everywhere 6.8 - 6.9 which corresponds to the region of stability of ferric hydrozide which is the basic product of iron corrosion. The rate of corrosion in such solutions is uniform. A reduction in the stationary pH value is followed by a change in rate of corrosion. Ten references; 1 English since 1924. Table, graph.

Institution : Acad. of Sc. Latvian-SSR, Institute of Chemistry, Riga

Submitted : June 1, 1953





APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859210008-7"

USSR .

79002* Relation of the Corrosion Rate of Iron to the pH of Solution, and the Passivation of the Metal in Alkaline Solutions. **Zavisimost' skorosti korrozii zheleza ot pH rastvora i passivatsiia metalla v shchelochnykh rastvorakh.** [illegible] K. Lepin', A. Ya. Vaivade, and Z. P. Oshis. *Zhurnal [illegible] Khimii*, v. 29, no. 2, Feb. 1955, p. 350-355 [illegible]

Oxidation kinetics of Fe in [illegible] media, transition [illegible] form. Retardation of [illegible] at certain pH [illegible] table, diffraction [illegible]

SOV/137-58-11-23024

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 170 (USSR)

AUTHORS: Vayvade, A. Ya., Lokenbakh, A. K., Lepin', L. K.

TITLE: Apparatus for Investigating Corrosion in Aqueous Solutions of Salts at Elevated Temperatures (Ustanovka dlya issledovaniya korrozii v vodnykh rastvorakh soley pri povyshennykh temperaturakh)

PERIODICAL: Izv. AN LatvSSR, 1958, Nr 2, pp 111-114

ABSTRACT: Existing apparatus accomplished the regulation of temperature with a ± 1°C precision but did not ensure natural access of O_2. The authors propose to use a thermostat consisting of a cylinder with an outer container of steel bronze and an inner one of Cu. Between them is a layer of asbestos fiber 50 mm thick. A double water-cooled lid acts as a cooling element and prevents evaporation of the heat carrier (water). Heating is achieved by a 4.5-kw tubular electric heater; the temperature is regulated by a magnetic contact thermometer and an electromagnetic relay with a ± 0.15°C precision in the 20-95° range; the heat carrier is stirred with a centrifugal pump. Graduates serving as corrosion-testing devices are inserted into openings in the lid of the thermostat. To prevent evaporation of the solution a finger-shaped

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Apparatus for Investigating Corrosion in Aqueous Solutions of Salts (cont.)

water-cooled cooling element is used which rests on the graduate by means of four pins. This ensures a free access of O_2. The specimen is suspended by a glass hook from the end of the finger-shaped cooling element. The area of the specimen is 7 cm^2, the volume of the solution is 50 mℓ. The thermostat has 260 points.

A. A.

Card 2/2

SOV/76-33-2-19/45

5(4)
AUTHORS: Lepin', L. K., Vayvade, A. Ya., Ozbis, Z. F.

TITLE: Oxidation Kinetics of Iron in Aqueous Solutions of the Salt Mixtures [$KCl(K_2SO_4)+K_3PO_4(K_2HPO_4,K_2CO_3)$] (Kinetika okisleniya zheleza v rastvorakh smesey soley [$KCl(K_2SO_4)+K_3PO_4(K_2HPO_4,K_2CO_3)$])

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 2, pp 357 - 366 (USSR)

ABSTRACT: On the basis of observations in previous papers (Refs 1-6) it can be assumed that the prevention of iron corrosion in neutral salt solutions of alkali metals (chlorides, sulfates) occurs through an electrophoretic blocking of the cathodic segments of the metal surface by the positively charged γ-FeO(OH) particles. This assumption is corroborated by the determinations of the electrode potential of iron (Refs 6,7). The iron oxidation in carbonate and phosphate solutions of the alkali metals is nevertheless hindered by negatively charged α-Fe(OH) particles and this can finally lead to a passivation of the metal surface (Refs 2-6). For this reason it seemed interesting to carry out investigations

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with mixtures of the above mentioned salts. A few important papers concerning this matter are given, among which are those by I.Shtern, Ts. Gul'yannskaya and K.Nekrasov (Ref 11), M. A. Rozenberg and Ye. I. Pogorel'skiy (Ref 13), I. L. Rozenfel'd (Ref 14), and others (Refs 8-10, 12), and it is found that the prevention of corrosion must depend upon the proportional amount of the salt components. For this reason the kinetics and the character of the iron corrosion were investigated for solutions of KCl, K_2SO_4, K_2HPO_4, K_3PO_4 and K_2CO_3, and binary solutions of these salts at 20°C. For these studies steel 10(C - 0.13%, Si-0.28%, Mn-0.55%, P - 0.036%, S - 0.042%, the rest Fe) was used. It was observed that an increase in the phosphate or carbonate concentration (Figs 3-5) with a constant concentration of KCl or K_2SO_4 (under 1.0 n) accelerates the corrosion at the beginning, then this effect passes through a maximum and fades with a ratio of the inhibitor to the salt of 5(10) : 1 to exhibit a passivating effect. At concentrations

of KCl > 1.0 n no maximum appears and the corrosion is not completely inhibited. It is assumed that with small salt concentrations an inhibition of the corrosion occurs according to the above assumption, by γ-FeO(OH) particles, while at higher concentrations of the inhibitor negative particles block the anodic segments. The observed maximum on the corrosion-concentration curves is explained in terms of an over-charging of the particles, which block the metal surface. There are 6 figures, 3 tables, and 17 references, 12 of which are Soviet.

ASSOCIATION: Akademiya nauk Latv. SSR, Institut khimii (Academy of Sciences Latv. SSR, Institute for Chemistry)

SUBMITTED: July 10, 1957

L 18447-66 EWT(m)/EWA(d)/EWP(j)/T RM

ACC NR: AP6002551 (A) SOURCE CODE: UR/0286/65/000/023/0047/0047

AUTHORS: Laukevits, Ya. Ya.; May, L. A.; Dreymanis, Ya. A.; Tutere, A. P.; Povzner, L. Yu.; Vayvad, A. Ya.; Katkevich, A. K.

ORG: none

TITLE: Method for producing surface-active silicone polymers. Class 39, No. 176683 [announced by Institute of Chemistry, Academy of Sciences Latvian SSR (Institut khimii Akademii nauk Latviyskoy SSR); Central Structural Bureau For Administration of the Chemical and Silicate-Ceramic Industry Sovnarkhoz, Latvian SSR (Tsentral'noye konstruktorskoye byuro upravleniya khimicheskoy i silikatno-keramicheskoy promyshlennosti sovnarkhoza Latviyskoy SSR)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 47

TOPIC TAGS: silicone, surface active agent, polymerization, esterification

ABSTRACT: This Author Certificate presents a method for producing surface-active silicone polymers by esterification with alcohols and subsequent hydrolysis and thermal condensation polymerization of a mixture of silicone monomers. To extend

Card 1/2 UDC: 678 84:66.093.8

L 18447-66
ACC NR: AP6002551

and decrease the cost of the raw basis, a mixture of trimethylchlorosilane with silicon tetrachloride is taken as the silicone monomer. The esterification is produced with alcohols having more than three carbon atoms.

SUB CODE: 07, 11/ SUBM DATE: 02Jul64

Card 2/2 nlg5

IYEVIN 'SH, A.F.[Ievinš, A.], glav. red.; EYDUK, Yu.Ya.[Eiduks,J.], zam. glav. red.; VAYVAD, A.Ya.[Vaivads,A.], red.; KUKURS, O.K., red.; MAKSIMOVA, O.S., red.; UPITE, A.Yu., red.; DYMARSKAYA, O., red.

[Glazes, their production and application] Glazuri, ikh proizvodstvo i primenenie. Riga, Izd-vo AN Latviiskoi SSR, 1964. 249 p. (MIRA 18:4)

1. Latvijas Padomju Socialistiskas Republikas Zinatnu Akademija. Kimijas instituts.

VAYVAD, Al'bert Yakovlevich [Vaivads, A.]; GOFMAN, Boris Ernestovich [Hofmans,B.]; KARLSON, Karl Petrovich [Karlsons, K.]; TEYTEL'-BAUM,A. [Teitelbaums,A.], red.; BOKMAN,R.[Bokmans,R.], tekhn. red.

[Dolomitic binders] Dolomitovye viazhushchie veshchestva. Riga, Izd-vo Akad.nauk Latviiskoi SSR, 1958. 258 p. (MIRA 14:12)
(Dolomite) (Binding materials)

VAIVADS, A.

Brit Abs B1
June 1953

Building and road-making materials

(5)
Trail

Use of gypsum quarry wastes as a source of bonding agents. Yu. Eidiņš, A. Vaivāds, A. Apiņš, and B. Holman (*Kim. Inst. Zinatnishie Raksti, Riga*, 1950, 1, 5—33).—The wastes contain 46—65% of $CaSO_4.2H_2O$, 15—33% of dolomite, and 12—20% of clay; when heated to 170° they yield a second-grade plaster of Paris, and a product resembling anhydrite cement is obtained with optimum mechanical properties by calcination at 750—850° with 1% of $NaHSO_4$+5% of CaO+15% of open-hearth slag: it contains $CaSO_4$ with small quantities of CaO,Al_2O_3+$2CaO,SiO_2$.

HAYMAN, M.

(3)

Brit Abst. BI
June 1953
Building and
Road Making
Materials

Possibility of extending the range of Portland cements in the Latvian SSR. K. Karlson, Yu. Eidiks, and A. Vaivads (*Kim. Inst. Zinatnishie Raksti, Riga*, 1950, 1, 171—188).—The conditions are established for obtaining high-grade Portland cement by firing at 1485° a mixture of clay from the Brotsensk district with lime, the coeff. of saturation of SiO_2 by CaO in the clinker being 0·94. In an attempt to find suitable pozzuolanic Portland cement mixtures, it is established that the most suitable "hydraulic" addition is clay from the Kengarag district, fired at 900°, since the cement produced with it is salt-resistant and stronger after storage in water for 180 days than plain Portland cement. The suitability of a fired clay for this purpose can be assessed from an analysis of the H_2O extract from it: <5% of the Al_2O_3 in the clay should be present.

R. C. MURRAY.

VAIVADS, A.

Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
Cement, Concrete, and Other
Building Materials

(4)

Suitability of local (Latvian) dolomite and lime marls for the production of Roman cement. J. Riduks, A. Vaivads, and K. Mjagkova (Acad. Sci. Latv., S.S.R., Riga). *Latvijas PSR Zinātņu Akad. Vēstis* 1950, No. 12 (Whole No. 41), 147-60(Russian summary, 161-2).—The Riga district dolomite marls investigated had the following hydraulic moduli and $CaCO_3/MgCO_3$ ratios, resp.: marl I, 1.89, 1/0.967; II, 1.55-2.54, 1/0.947-0.895; III, 1.03-2.37, 1/0.951-0.930. The lime marl (IV) had modulus 1.73-2.23 and contained 72.2-76.2% $CaCO_3$. From I, II, and III, satisfactory Roman cements were obtained by baking at 800-850°. Addn. of 1-5% gypsum increased the strength by 10-50% but influenced the hardening time only slightly. IV gave Roman cement upon baking above 1100°. Generally, good cement could be obtained from dolomite marls if they contained over 10% of homogeneously dispersed clay and were baked until the product was left with 4-8% CO_2 content; e.g., heating for 6 hrs. at 750-850° gave best results with piece size 20 × 40 mm. Lime marls were suitable if they contained more than 20%, preferably 25-35%, clay. The mechanism of hardening is discussed on the basis of thermal analysis curves of the products. A. D.

4.

1. EIDUKS, J.: VAIVADS, A.: PILSKALNE, A.

2. USSR (600)

4. Latvia - Clay

7. Adsorption properties of various clays of the Latvian S.S.R. Latv. PSR Zin. Akad. Vestis 2, 1951.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

1. EYDUKS, J.; VAYVADS, A.; CIRULIS, Fr.

2. USSR 600

4. Paper Industry

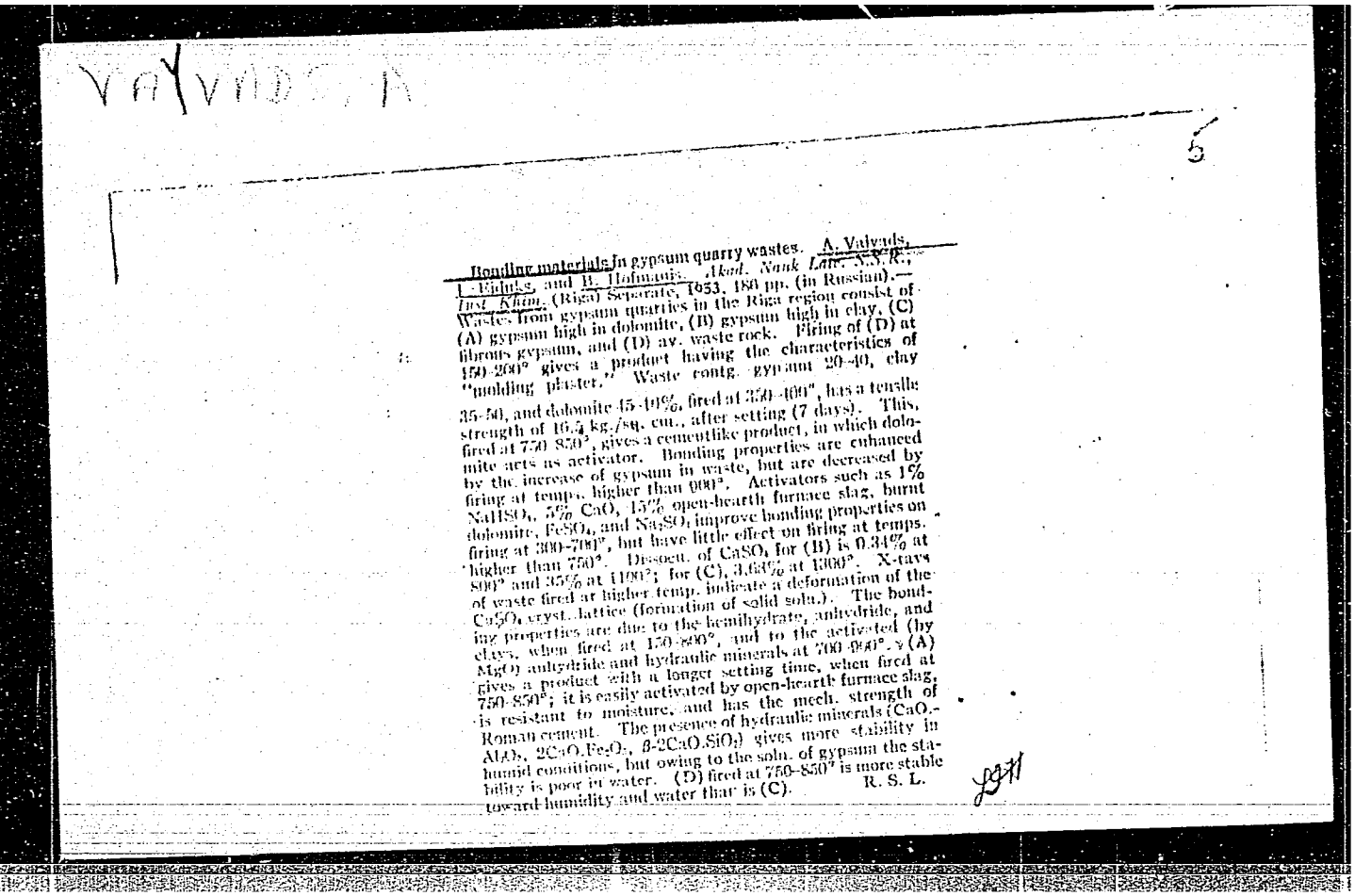
7. Fillers for paper from local raw materials, Latv. PSR Zin. Akad. Vestis, No. 9, 1951.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

VAYVAD, A. Ya. In Latvian

VAYVAD, A. Ya. — "Investigation of the Physicochemical and Technical Characteristics of Burnt Gysums Containing Dolomite and Clay." Latvian State U, 1953. In Latvian (Dissertation for the Degree of Candidate of Chemical Sciences)

SO: Izvestiya Ak. Nauk Latvivskov SSR, No. 9, Sept., 1955



Bonding materials in gypsum quarry wastes. A. Valvads, I. Ridiņš, and R. Hofmanis. *Akad. Nauk Latv. S.S.R., Inst. Khim.* (Riga) Separate, 1953, 180 pp. (in Russian).—Wastes from gypsum quarries in the Riga region consist of (A) gypsum high in dolomite, (B) gypsum high in clay, (C) fibrous gypsum, and (D) av. waste rock. Firing of (D) at 150–200° gives a product having the characteristics of "molding plaster." Waste contg. gypsum 20–40, clay 35–50, and dolomite 45–10%, fired at 350–400°, has a tensile strength of 16.4 kg./sq. cm., after setting (7 days). This, fired at 750–850°, gives a cementlike product, in which dolomite acts as activator. Bonding properties are enhanced by the increase of gypsum in waste, but are decreased by firing at temps. higher than 900°. Activators such as 1% $NaHSO_4$, 5% CaO, 15% open-hearth furnace slag, burnt dolomite, $FeSO_4$, and Na_2SO_4 improve bonding properties on firing at 300–700°, but have little effect on firing at temps. higher than 750°. Dissocn. of $CaSO_4$ for (B) is 0.34% at 800° and 35% at 1100°; for (C), 3.63% at 1300°. X-rays of waste fired at higher temp. indicate a deformation of the $CaSO_4$ cryst. lattice (formation of solid soln.). The bonding properties are due to the hemihydrate, anhydride, and clays, when fired at 150–800°, and to the activated (by MgO) anhydride and hydraulic minerals at 700–950°. (A) gives a product with a longer setting time, when fired at 750–850°; it is easily activated by open-hearth furnace slag, is resistant to moisture, and has the mech. strength of Roman cement. The presence of hydraulic minerals ($CaO.Al_2O_3$, $2CaO.Fe_2O_3$, β-$2CaO.SiO_2$) gives more stability in humid conditions, but owing to the soln. of gypsum the stability is poor in water. (D) fired at 750–850° is more stable toward humidity and water than is (C). R. S. L.

VAYVADS, A.

Production of new mortar binders from waste of gypsum mines under industrial conditions. J. Eiduks, A. Vaivads, and B. Hofmanis. *Latvijas PSR Zinatnu Akad. Vestis* 1953, No. 4(Whole No. 69), 91-6(Russian summary, 96-7).—Waste from gypsum mines contained $CaSO_4.2H_2O$ 67, dolomite 13.1, and clay 19%. In gypsum stills, at 100-80°, the waste gave a product conforming to specifications for the first grade plaster quality gypsum. In rotation furnace with gases 490-650° in and 150-70° out, a product equivalent to the second grade gypsum was obtained; its properties improved with storage. In the lime oven at 1000-1100°, the product obtained was similar to anhydrite cement, with CaS 1.11, free CaO 14.9, and free MgO 7.5%. The presence of CaS caused nonuniformity of vol. change, which could be amended by storage or by addn. of 0.5-1.0% $FeSO_4$.

Andrew Dravnieks

(2)

VAYVADS, A.

4

Thermographic and röntgenographic studies of the mineralogical composition of various Latvian Quaternary clays. J. Riduks and A. Vaivads (Inst. Chem., Acad. Sci. Latv. S.S.R., Riga). *Latvijas PSR Zinātņu Akad. Vēst.* 1953, No. 9(Whole No. 74), 103-16(Russian summary).—The main constituent of the Latvian Quaternary clays was hydromica (illite) in the Krustpils, Aknīstes, and Ozolnieki clays, and another hydromica which was closer to mica than the illite, in the Kalnciems, Kalkūni, and Broceni clays. In addn., these clays contained montmorillonite as a transformation product of illite. Accessory minerals were quartz, muscovite, dolomite, hydrogoethite, etc. No kaolinite or halloysite was detected. Andrew Dravnieks

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VAYVADS, A.

Thermographic and röntgenographic studies of mineralogical composition of some Latvian Devonian, Triassic, and Jurassic clays. L. Eidaks and A. Vaivads (Inst. Chem., Acad. Sci. Latv. S.S.R., Riga). *Latvijas PSR Zinatnu Akad. Vestis* 1953, No. 10(Whole No. 76), 125-35(Russian summary, 136).—Latvian Devonian, Triassic, and Jurassic clays consist mainly of the illite-type hydromica in various stages of degradation. In Rosica and Pulvernieki Jurassic clays the degradation reached kaolinite (20–5%). In most clays, Na and Mg montmorillonite with rather poorly defined lattice were present in varying amts. The Kengarags and Saurieši clays belonged to the beidellite type, contg. kaolinite and halloysite (10%). Triassic clays were similar to the Devonian clays. In all clays, hydrated muscovite could be found.

Andrew Dravnieks

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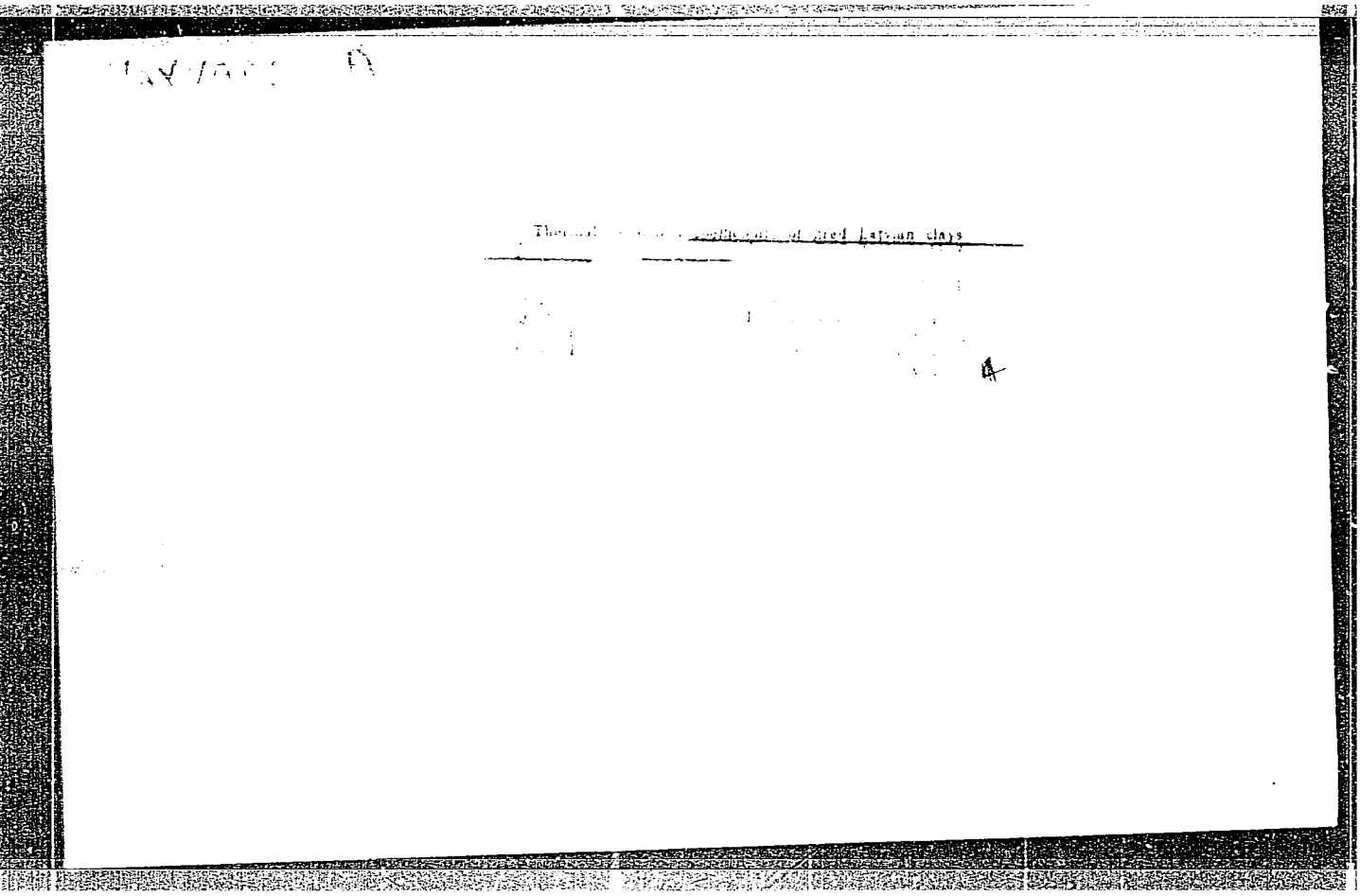
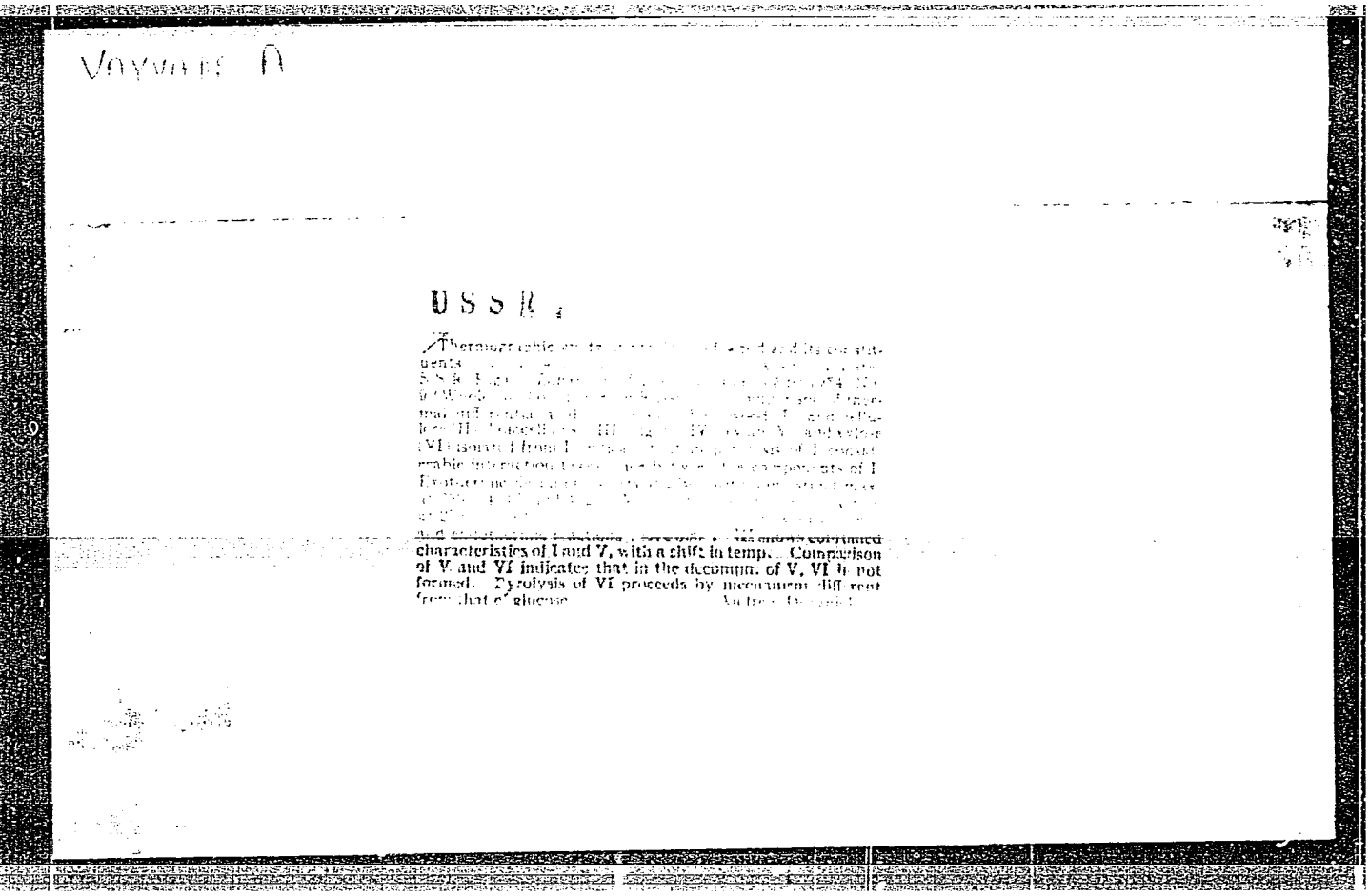


VAYVADS A

Variation of properties of lead-free and boron-free vitreous enamels with the fritting temperature. J. Eiduks and A. [illegible] (Chem. Inst. Acad. Sci. Latvian S.S.R., Riga). *Latvijas PSR Zinātņu Akad. Vēstis* 1954, No. 1 (Whole No. 78), 129-38 (Russian summary, 139). The following frits were investigated: Na_2O 0.20, K_2O 0.20, CaO 0.10, MgO 0.08, ZnO 0.30, BaO 0.12, Al_2O_3 0.10, and SiO_2 3.0 moles, and with 0, 0.40, or 0.80 mole F. The best properties were obtained by fritting at 1250-1300°. F decreased the melting temp., alky. of the suspension, and coating temp., but increased the wetting ability of the enamel. The amt. of F left after fritting at 1400° was 0.9-1.1%. The linear thermal expansion coeff. decreased with fritting temp.; this change was larger in the F-bearing enamels. The best enameling temp. decreased by 20-100° with increase in the fritting temp., for the F-bearing types, but did not change in the F-free compns.

Andrew Dravnieks



USSR

characteristics of I and V, with a shift in temp. Comparison of V and VI indicates that in the decompn. of V, VI is not formed.

VAYVADS, A.

2865. Influence of lithium on physicochemical characteristics of low-melting (ceramic) glazes.—J. Eiduks and A. Vaivads (*Latv. PSR Zinat. Akad. Vestis*, No. 11 (White No. 88), 115, 1954; abstracted in *Chem. Abstr.*, 49, 9247, 1955). · Low-melting glazes were prepared from quartz sand and chemically pure substances. Li in amounts up to 7·7% Li_2O was introduced as Li_2CO_3, being substituted first on molar basis for Na, K, Ca and Mg, and then (wt. % basis) for other elements, starting with the basic mixture (%): SiO_2, 69·46; Al_2O_3, 11·93; Na_2O, 7·6; K_2O, 7·68; CaO, 2·13; MgO, 1·2. The mixture was fritted at 1,300° C. Substitution of Li for Na decreased the softening temperature (I) and the temperature (II) at which the liquid phase begins to form. These effects reached a maximum at 0·14 mol.% Li_2O. With bigger additions, I and II increased again. Substitution of Li for K, Ca, Mg, Si, and Al decreased I and II. Substituting Li for Na, the thermal expansion coefficient (III) decreased to a minimum above 3·8 wt.% Li_2O. Substituting Li for K, III decreased to a minimum at 1·17–2·57 Li_2O, then at higher Li content, increased. Substituting Li for Ca, III decreased slightly; for Mg, it increased slightly. The *p*H of the suspension was 10–11, and increased with Li content. Grindability increased with the substitution of Li for K and was best with mixtures in which K was partly replaced by Li. Crystallization (IV) intensified when Li content exceeded 1%. The wettability of the molten frits (measured by contact angle) was generally poor, and did not change with the replacement of K by Li, but improved when Li was substituted for other components. Taking into account I, II, III, and IV, the optimum Li content was 0·8–1·0%. For articles made of clays containing 15% carbonates, the best mixture was (%): SiO_2, 70·3; Al_2O_3, 12; Na_2O, 7·7; K_2O, 6·0; CaO, 2·2; MgO, 1·2; Li_2O, 0·58; with III 73×10^7. For faience, the three following mixtures are suggested, to be fired at 1,020°–1,050° C.: SiO_2, 70·4; 71·2, 73·3; Al_2O_3, 12·1, 12·2, 12·6; Na_2O, 5·2, 7·8, 8·0; K_2O, 7·8, 4·2, 0·0; CaO, 2·2, 2·2, 2·2; MgO, 1·2, 1·2, 1·3; Li_2O, 1·16, 1·17, 2·57. Determination of softening, melting, and liquidus temperature and crystallization is described.

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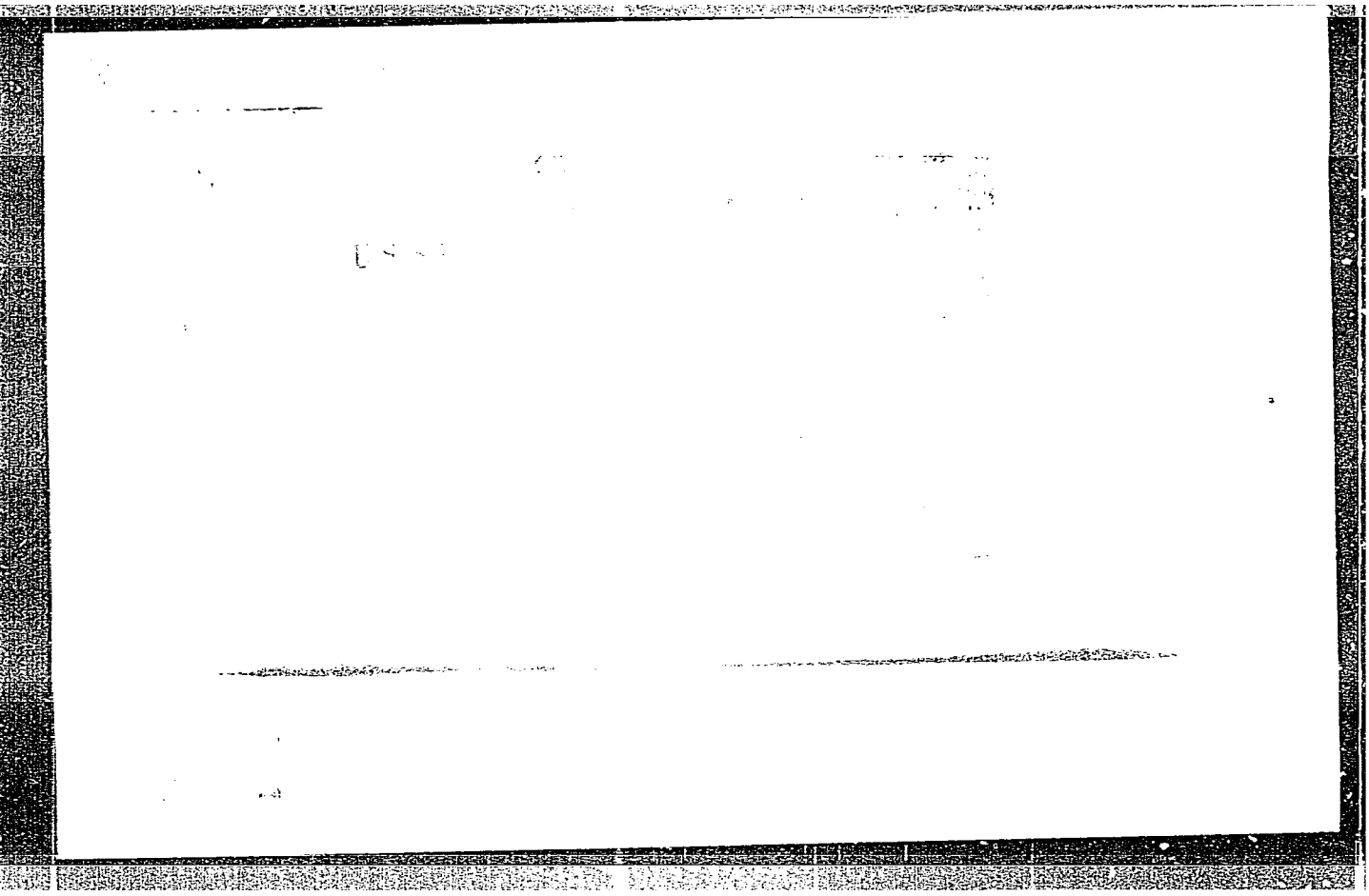
VAYVADS, A.

USSR

Increase of the thermal expansion coefficient of ceramic materials. A. Vaivads and I. Eiduks. *Latvijas PSR Zinatnu Akad. Vestis* 1955, No. 1(Whole No. 90), 139–48 (Russian summary, 148–9).—The influence of various addns. on thermal expansion coeff. (I) of clays was studied at firing temps. 800–1000°, in an attempt to increase I of several Latvian clays from 47–82 × 10^{-7} to 76–86 × 10^{-7}, so as to match I of Pb- and B-free ceramic glazes. Addn. of 20–30% limestone (II) or dolomite (III) increased I by 37–50%; 2–3% Na_2CO_3 also increased I; the suggested addn. is free clays if fired at 900°, but in the carbonate-bearing clays at 1000°. I of the natural minerals such as limestone, dolomite, or magnesite was very high (23–33 × 10^{-6}) but rapidly decreased on successive firings, and stabilized at approach to the dissocn. temp. It is proposed that this effect explains local glaze failures on the once-fired articles. Viterite, limestone, or dolomite on a percentage basis, were equally efficient in increasing I. Addn. of quartz sand increased I at firing below 900°, but above 900°, max. I was obtained at 5–10% sand. Increases in I resulted also from addn. of $Ca(OH)_2$, $BaCO_3$, and apatite. The following addns. are suggested for best results in increasing I: limestone or dolomite, 10–30%; [illegible] Na_2CO_3, 1–2%; or quartz sand 5–10%; or not more [illegible]% $Ca(OH)_2$. A. D.



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USSR/Cosmochemistry - Geochemistry. Hydrochemistry, D

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61317

Author: Vaivads, A., Upite, A.

Institution: None

Title: Investigation of Mineralogical Composition of Clays by the Method of Dyeing

Original Periodical: Latvijas PSR zinatnu akademijas Vestis, Izv. AN Latv SSR, 1956, No 2, 127-134; Latvian; Russian resumé

Abstract: None

Card 1/1

VAYVAD, A. YA

USSR/Chemical Technology - Chemical Products and Their Applications - Silicates. Glass. Ceramics. Binders. I-10

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, 9059

Author : Hofman, B.E., Vayvad, A.Ya., and Karlson, K.P.

Inst : Academy of Sciences Latvian SSR

Title : Dolomitic Roman Cement of Improved Quality

Orig Pub : Izv. AN LatvSSR, 1956, No 4, 119-138

Abstract : A method has been developed for improving the strength of Roman cement (RC) by the addition of optimum amounts of gypsum dihydrate (8%) and of soluble anhydrite. The addition of 0.5% anhydrite results in an increase of approximately 50% in the strength of RC. When the RC is mixed with hydrated gypsum, the

Card 1/3

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, 9059

strength of the former is increased 25-50%. Furthermore, the addition of gypsum eliminates inequalities in the expansion of the cement. A method for the production of gel-type cement according to the Vurnazo method has been developed and is based on the utilization of the water-absorbing properties of MgO. Cements prepared by this method show a 50-100% gain in strength over ordinary RC. The optimum amount of gel is 15%. Maximum strength of the mortars is obtained by the addition of gypsum dihydrate (0.8% of the weight of the cement). It is reported that pilot plant experiments have been carried out to investigate the regulation

USSR/Chemical Technology - Chemical Products and Their Applications - Silicates. Glass. Ceramics. Binders. I-10

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, 9059

of the setting time of dolomitic RC by wetting calcined marls with 1-2% water; however, such treatment results in a marked reduction in the strength of the RC.

Card 3/3

Vaivads, A.

USSR /Chemical Technology. Chemical Products and Their Application I-12

Silicates. Glass. Ceramics. Binders.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31512

Author : Vaivads A., Upite A., Kukurs O.

Inst : Academy of Sciences Latvian SSR

Title : Zirconium-Containing Opaque Glazes for Building Ceramics

Orig Pub: Latv. PSR zinatnu Akad. vestis, Izv. AN LatvSSR, 1956, No 8, 121-130

Abstract: A study of the effect of Zr on properties of boron-free and lead-free glazes, and also on the properties of a glaze containing small

Card 1/3

USSR /Chemical Technology. Chemical Products and Their Application I-12

Silicates. Glass. Ceramics. Binders.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31512

amounts of Pb and B, has revealed that Zr decreases the coefficient of thermal expansion of the glaze (a_{20-400}), increases its chemical stability and melting point. Opacity of the glaze increases with increasing Zr-content and decreases with increasing melting point of the glaze. PbO in amounts of 10-30% lowers the melting point of Zr-glazes by 45-85°, without affecting the a_{20-400}. In the presence of PbO luster and evenness of the glaze are enhanced, but the opacity is decreased. Glazes containing 30% PbO are transparent. An increase of the amount of Zr, in glazes containing B, causes an increase in chemical stability and lowers the

Card 2/3

USSR /Chemical Technology. Chemical Products and Their Application I-12

Silicates. Glass. Ceramics. Binders.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31512

refractive index and a_{20-400} of the glaze. Mineralogical and roentgenographic analyses have shown that opacity of Zr-glazes is due to a separation, from the liquid phase, of $ZrSiO_4$ and ZrO_2 crystallites.

Card 3/3

VAIVADS, A. (Riga); KUKURS, O. (Riga); EIDUKS, J. (Riga)

Thermography of easily fusible glaze. Vestis Latv ak no.9:107-118 '59. (EEAI 9:10)

1. Latvijas PSR Zinatnu akademija, Kimijas institutus.
(Glazes)

MILLERS, T. (Riga); KARLSONS, K. (Riga); VAĪVADS, A. (Riga)

Usefulness of domestic dolomite quicklime for production of lime-sand blocks. III. Carbonization of solutions of Ieriki and Ape dolomite quicklime. Vestis Latv ak no.10:97-106 '59. (EEAI 9:10)

Latvijas PSR Zinatnu akademija, Kimijas instituts
(Latvia--Dolomite)
(Latvia--Lime)

VAYVANTSEV, D.

29654

boriba ea uskoryeniye oborota sevedstv 1 Raevitiye khoeraschyeta. Oprt Iyeningr. Eavoda (Elyektrosila) im. S. M. kirova voprosy ekonomili, 1949 No. 7, s. 16-26

SOL LETOPIS' NO. 40

VAYVANTSEV, P. 15G52

USSR/Electric Equipment 4406. Jan 1947

"Mobilization of Intra-plant Resources," P. Vayvantsev, 2½ pp.

"Sov Finansy" Vol VIII, No 1

Relates experience of Elektrosila electric machinery plant in Leningrad in eliminating losses by making full use of all plant resources. Concerted effort made to collect all outstanding accounts and to make sales only to enterprises guaranteeing payments when due.

LC 15G52

LESIN'SH, K.P. [Lesins, K.], kand.veter.nauk, otv.red.; VAYVARINA, G.F. [Vairarina, G.], kand.veter.nauk, red.; LAZDYNYA, M.A. [Lazdina, M.], red.; TSINOVSKIY, Ya.P., doktor biolog.nauk, red.; TEYTEL'BAUM, A., red.; PILADZE, Ye., tekhn.red.

[Problems in parasitology in the Baltic republics; materials] Voprosy parazitologii v pribaltiiskikh respublikakh; materialy. Riga, Izd-vo Akad.nauk Latviiskoi SSR, 1961. 292 p. (MIRA 15:5)

1. Nauchno-koordinatsionnaya konferentsiya po problemam parazitologii v Pribaltike. 2d, Riga, 1960. 2. Institut biologii AN Latv.SSR (for Lesin'sh). 3. Latviyskaya sel'skokhozyaystvennaya akademiya (for Vayvarina). 4. Sanitarno-epidemiologicheskaya stantsiya Ministerstva zdravookhraneniya Latviyskoy SSR (for Lazdynya).
(BALTIC STATES--PARASITOLOGY)

USSR / Diseases of Farm Animals. Diseases Caused by Helminths. R-2

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7326

Author : G. F. Vayvarinya
Inst : Not Given
Title : Anatomy and Morphology of Probstmayria vivipara and its Distribution Among Horses of the Latvian SSR.

Orig Pub: Latv. lauksaimniecibas akad. taksti. Tr. Latv. s-kh. akad. 1956, vyp. 5, 241-246.

Abstract: Provides a description of Probstmayria vivipara, based on a large amount of material obtained from horses of the Latvian SSR. "Probstmayriosis" has been discovered in 33 percent of the horses dissected and in 9.5 percent of those examined coprologically. Describes the localization of the parasite.

Card 1/1

Single Phase Bridge-Rectifier Scheme in the Field Current of a Synchronous . . . .

sinusoidal voltage across the rectifier input, the synchronous-generator field winding can be replaced with a resistance equal to the DC resistance of this winding and a filter passing only the DC component of the rectifier output voltage. The validity of this assumption is confirmed by experiments conducted with various types of generators. With this assumption accepted, valve currents under various conditions have been determined, the limit conditions imposed by the valve parameters have been found, and the relationship between the field-winding direct current and the rectifier-input sinusoidal-voltage amplitude has been determined. Knowing the influence of frequency upon the field-winding resistance and time constant, the inference is drawn that in calculating currents and voltages in the bridge arms, fed by sinusoidal current, the field-winding time constant (under short-circuit conditions of the rectifier) can be taken equal to infinity.

A.A.V.

S/690/61/001/000/001/003
D234/D301

AUTHOR: Vayvars, M.P.

TITLE: An automatic device for determining the permissible back voltage of semiconductor diodes in static regime

SOURCE: Akademiya nauk Latviyskoy SSR. Institut elektroniki i vychislitel'noy tekhniki. Trudy, v. 1, 1961. Avtomatika i vychislitel'naya tekhnika, no. 1, 65 - 78

TEXT: Semiconductor diodes are at present sorted by observing the V-A characteristic of back voltage. The author states that this method can only be improved with the aid of an automatic device using accurately formulated criteria. If the regime is static, two criteria are found to be adequate: 1) The derivative of back current with respect to back voltage; 2) Power lost in the diode during the flow of back current. A general description and diagram of the device using these criteria are given. Transfer coefficients of separate elements of the device are determined from the equations of the latter. It is stated that the experimental sorting was carried

Card 1/2

An automatic device for determining ...

out with satisfactory results, and study of errors showed that the total error in the value of permissible back voltage does not exceed 4 - 6 %. There are 5 figures.

Card 2/2

29910
S/548/61/000/011/007/008
E194/E455

9,2150 (1159,1482)

AUTHOR: Vayvars, M.P.

TITLE: Equipment for automatically determining the permissible inverse voltage of semiconductor diodes

SOURCE: Akademiya nauk Latviyskoy SSR. Institut energetiki i elektrotekhniki. Trudy. no.11. Riga, 1961. Poluprovodniki i ikh primeneniye v elektrotekhnike, no.1. 87-93

TEXT: In manufacturing semiconductor rectifier elements, it is important to sort them according to permissible inverse-voltage. This sorting is now done by observing the inverse-voltage volt-ampere characteristics at a given diode temperature using a cathode-ray oscillograph. The permissible voltage is considered to be that at which the volt-ampere characteristic commences to fall sharply. The method is unsatisfactory, being subjective and rather indeterminate. Accordingly, equipment was developed for automatic sorting of diodes according to strictly formulated criteria. Characteristic curves of many diodes have a clear inflection point and then there is a definite inverse-voltage at which the increase in inverse current becomes so great that even slight further increase in the voltage leads to breakdown of the

Card 1/4

Equipment for automatically ...

p-n junction. Accordingly, a maximum permissible value of the rate of change of current with voltage can be set to define the permissible inverse-voltage. Other diodes have a gradually drooping volt-ampere characteristic with no clear inflection point; instead, the inverse current gradually increases until the power evolved causes thermal ionization and electrical breakdown of the p-n junction. In diodes with such characteristics, the maximum permissible inverse-voltage is that at which the power evolved is the maximum permissible. Accordingly, in sorting diodes, two separate criteria must be used according to their characteristics, namely the value of the rate of change of inverse current with inverse-voltage and secondly the power evolved in the diode when the inverse current flows. A block circuit diagram of the new sorting equipment is shown in Fig.3. Unit 1 generates a steadily increasing voltage which is applied to the circuit 2 consisting of the diode under test (D) in series with an ohmic resistance R. The voltages on the diode and on the resistance are applied to unit 3. The voltages on the output terminals of this unit are proportional to the voltage on the diode u_D and the voltage on the ohmic resistance u_R. These two voltages further pass through the differentiating unit 4 and are also applied to the

Card 2/4

Equipment for automatically ...

multiplying unit 5. The voltages on the output of the differentiating unit $du_д/dt$ and du_R/dt are applied to the divider unit 6. The voltage output from this unit is proportional to the rate of change of diode current with voltage, $di_д/du_д \equiv du_R/du_д$. This voltage is applied to the relay circuit 7. The relay operates at a preset value of $di_д/du_д$ and the lamp Л-1 signals that the relay has operated. In the other circuit, the output voltage of the multiplier unit 5, which is proportional to the power P evolved in the diode when the inverse-current passes through it, is applied to the relay 8. The signal lamp Л-2 indicates operation of this relay. The practical arrangements are such that when the starting button is pressed a gradually-rising voltage is applied to the rectifier until one or other of the relays operates. The lamp shows which of the criteria is defining the permissible inverse-voltage. The equipment was used to sort germanium diodes type ВГ-10 (VG-10) and worked well, giving accurate results. Study of the errors introduced by the individual units of the equipment indicated that the error in determining the value of permissible inverse-voltage was not greater than 4 to 6%. By way of

Card 3/6 4

Equipment for automatically ...

illustration, Fig.5 gives oscillograms of increasing voltage on a diode and rate of change of current with voltage for a rectifier in which the characteristic has a clear inflection point. In these curves the time in seconds is plotted on the x axis and the rate of change of current with voltage on the y axis. It will be seen from the oscillogram that increasing the value of the criterion di/du increases the value of the permissible inverse voltage. Since the device permits automatic determination of the permissible inverse-voltage of semiconductor diodes, it can be used as a component part of a cybernetic machine for automatically sorting semiconductor diodes. There are 5 figures.

Card 4/4

YAKUBAYTIS, E. [Jakubaitis, E.]; VAYVARS, M. [Vaivars, M.]

Device for determining the time constant of a decaying electromagnetic process. Vestis Latv ak no.3:41-50 '61.

1. Institut elektroniki i vychislitel'noy tekhniki AN Latviyskoy SSR.

YAKUBAYTIS, E.[Jakubaitis, E.] (Riga); VAYVARS, M.[Vaivars, M.](Riga)

Device for determining time constants of an electromagnetic attenuation process. Vestis Latv ak no.3:41-50 '61.
(EEAI 10:9)

1. Akademiya nauk Latviyskoy SSR, Institut elektroniki i vychislitel'noy tekhniki.

(Electromagnetism)

S/690/62/003/000/005/009
D201/D308

9.4310

AUTHOR: Vayvars, M.P.

TITLE: Automatic determination of d.c. parameters of transistors

SOURCE: Akademiya nauk Latviyskoy SSR. Institut elektroniki i vychislitel'noy tekhniki. Trudy, v. 3, 1962. Avtomatika i vychislitel'naya tekhnika, no. 3, 93-104

TEXT: The author describes the circuit diagrams and analyzes the operation of electronic units for the automatic determination of transistor d.c. parameters: the circuits could be used in automatic production testing. The first unit, designed for automatic determination of reverse emitter or collector junction current, consists of a d.c. amplifier as current source, two amplifiers for obtaining voltages varying as the transistor voltage and current respectively and of two further amplifiers for logic operations of comparison and control. The second unit described is for determining the transistor d.c. gain at a given collector current and emitter-t-

VB

Card 1/2

Automatic determination ...

base voltage. The unit has three distinct parts: an integrating amplifier as a supply source, two amplifiers for producing a voltage proportional to the base current and two further amplifiers for logic comparison operations and for setting the voltages of voltage sources. The units operate in such a manner that the effect of the amplifier input current is completely eliminated, which results in an accurate evaluation of the parameters of transistor in a given configuration. The error, if any, is introduced only by the zero amplifier drift. The units can be designed using typical circuits of operational d.c. amplifiers. There are 4 figures.

Card 2/2

L 04413-67

ACC NR: AT6019744 SOURCE CODE: UR/3192/65/000/011/0119/0132

AUTHOR: Yakubaytis, E. A.; Vayvars, M. P.; Frantsis, T. A.; Laksa, Ya. Ya. 56 B+1

ORG: none

TITLE: An automaton which determines the breakdown voltage of high-voltage power diodes

SOURCE: Akademiya nauk Latviyskoy SSR. Institut elektroniki i vychislitel'noy tekhniki. Avtomatika i vychislitel'naya tekhnika, no. 11, 1965, 119-132

TOPIC TAGS: semiconductor diode , silicon diode, dielectric breakdown, automaton

ABSTRACT: The authors describe an automaton capable of determining the breakdown voltage of diodes in the 150 to 2,000 v range and of inverse currents up to 200 ma. The paper presents the basic equations, a description of the device (a block diagram of the automaton, a diagram of the high-voltage voltage-to-binary code converter, logical scheme, decoder scheme, and automatic power and counter control diagram), and the logic of its operation. The load curves of the nonlinear block, the volt-ampere characteristic of diodes, and limiting values of voltage increments are also given. Orig. art. has: 14 formulas, 9 figures, and 4 tables.

SUB CODE: 09, 20/ SUBM DATE: Nov64/ ORIG REF: 003

Card 1/1 UDC: 621.382.2: 621.317-52

L 8527-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACC NR: AT5027519 SOURCE CODE: UR/2690/65/008/000/0049/0060

AUTHOR: Vayvars, M. P.

ORG: Institute of Electronics and Computer Technology, AN LatSSR, Riga (Institut elektroniki i vychislitel'noy tekhniki AN LatSSR)

TITLE: Nonlinear power unit with hyperbolic load curves

SOURCE: AN LatSSR. Institut elektroniki i vychislitel'noy tekhniki. Trudy, v. 8, 1965. Avtomatika i vychislitel'naya tekhnika, 49-60

TOPIC TAGS: semiconductor device, circuit design, nonlinear automatic control, voltage divider, voltage regulator

ABSTRACT: Nonlinear units are used for maintaining constant electrical power in elements having unknown or changing characteristics. Such a unit has a hyperbolic load curve in which the hyperbolic dependence is synthesized by sectionally linear approximation. The article presents a detailed description of the circuit diagram of a nonlinear unit built with semiconductor diodes and active resistors, and containing a common voltage divider for the generation of all reference voltages. The method for the calculation of pertinent parameters and the description of the study of the reproducibility of a particular load curve (from a family of curves) are also given. Results of the calculations show that a nonlinear unit can be designed with hyperbolic load characteristics having optimum parameters. Under optimum operating condi-

UDC: 681.142.6.001.2

Card 1/2

L 8527-66
ACC NR: AT5027519

tions the power consumed by the common voltage divider is at its minimum. Whenever the nonlinear unit reproduces a single curve from a given family, during the transition to another curve the magnitude of the voltage divider resistors should be changed. Keeping the values of these resistors unchanged would lead to an increase in the approximation error. The expediency of using a common voltage divider was suggested by Yu. S. Karp. Orig. art. has: 10 formulas, 6 figures, and 1 table.

SUB CODE: IE, EC, DP / SUBM DATE: 00 / ORIG REF: 002

Card 2/2

L 63219-65 EWT(l)/EEC(m)/EEC(k)-2/EWA(h)

ACCESSION NR: AR5005501 S/0271/64/000/012/B056/B057
681.142.621

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika. Sv. t., Abs. 12B324

AUTHOR: Yakubaytis, E. A.; Vayvars, M. P.; Frantsis, T. A.

TITLE: Discrete indication of the maximum value of product of two continuous voltages

CITED SOURCE: Izv. AN LatvSSR. Ser. fiz. i tekhn. n., no. 3, 1964, 77-87

TOPIC TAGS: voltage product indicator

TRANSLATION: The advantages are noted of discrete indicators of two-voltages product as compared to purely analog devices. The indicator does not contain any voltage-to-code converter; it is based on the principle of determining a multiplier for the known value of the multiplicand [illegible] maximum product. The voltages are [illegible] turn-on Zener-diode voltages correspond to various powers of 2. The diodes are switched by a logical circuit. A [illegible] design a relatively-accuracy circuit [illegible] and

Card 1/2

L 63219-65

ACCESSION NR: AR5005501

a maximum possible voltage ratio by the end of the first step. An example of calculation is given. Five illustrations.

SUB CODE: DP ENCL: 00

Card 2/2

L 38667-66 EWT(1)
ACC NR: AR6014545 SOURCE CODE: UR/0196/65/000/011/I025/I026

AUTHOR: Vayvars, Yu.; Kokle, Yu. Skruzitis, K.

TITLE: New contactless frequency changer

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 11I163

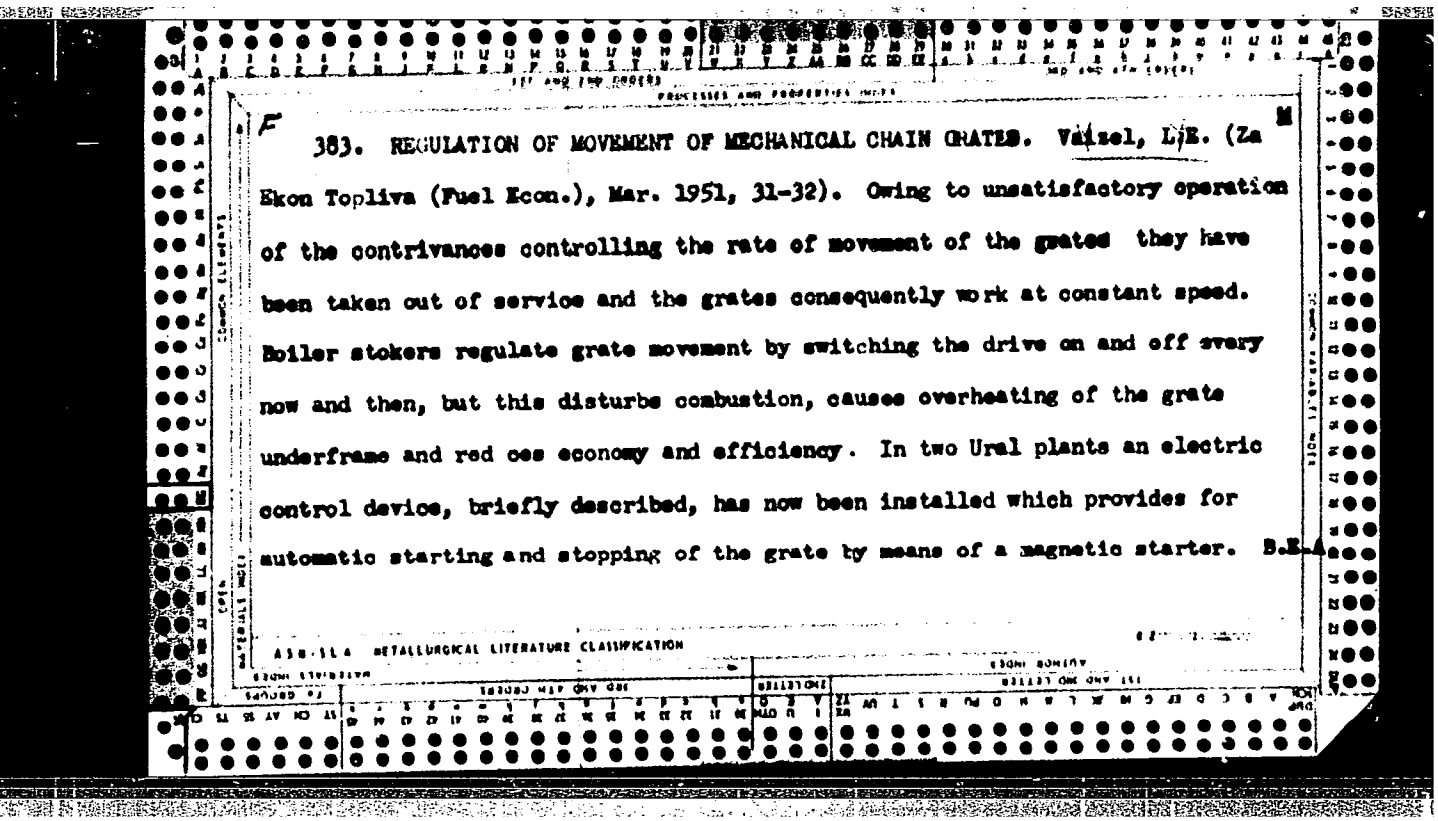
REF SOURCE: Sb. Beskontakt. elektr. mashiny. Vyp. 4. Riga, Zinatne, 1965, 107-114

TOPIC TAGS: frequency changer, frequency converter, inductor machine

ABSTRACT: A new type of rotary contactless frequency changer was designed and built at the Power-Engineering Institute, AN LatSSR. The changer comprises two machines in one frame: a motor represented by a contactless 3-phase synchronous machine with claw-type poles and external yoke and a generator represented by a 3-phase heteropolar inductor machine with 2-tooth winding and two tooth pitches on the stator. The rated power (at the generator end) is 6.4 kw; 3000 rpm; 400/230 v; efficiency, 0.80. Nine figures. One table. Bibliography of 2 titles. G. Salgus [Translation of abstract]

SUB CODE: 09

Card 1/1 vmb UDC: 621.314.261.(047.1)



F M

383. REGULATION OF MOVEMENT OF MECHANICAL CHAIN GRATES. Vaizel, L.E. (Za Ekon Topliva (Fuel Econ.), Mar. 1951, 31-32). Owing to unsatisfactory operation of the contrivances controlling the rate of movement of the grates they have been taken out of service and the grates consequently work at constant speed. Boiler stokers regulate grate movement by switching the drive on and off every now and then, but this disturbs combustion, causes overheating of the grate underframe and red ces economy and efficiency. In two Ural plants an electric control device, briefly described, has now been installed which provides for automatic starting and stopping of the grate by means of a magnetic starter. B.E.A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

VAYVERIS, V.A., inzh.

Transfer of a shaft limekiln to mazut. Stroi.mat. 9 no.3:23-25 Mr '63. (MIRA 16:4)

(Limekilns) (Mazut)

VAYVOD, R.[Vaivods, R.]

Development of the production of gypsum products in the Latvian S.S.R. Izv. AN Latv. SSR no.10:55-63 '62.
(MIRA 16:1)

1. Institut ekonomiki AN Latviyskoy SSR.

(Latvia—Gypsum products)

Fuel Abstracts
May 1954
Natural Solid
Fuels: Preparation

3454. MODERNIZATION OF TY E TsKKB PULVERIZED FUEL SEPARATOR. Vaizel, I.E., Vainitskii, S.R., Gacheqov, A.I. and Sladnikov, I.V. (Elekt. Sta. (Pwr Sta., Moscow), June 1953, vol. 24, 8-10). With screen R88 the efficiency of the separator was found to be high and the aerodynamic resistance low. Owing to the low velocity of the aerated dust flow the elements of the separator are subjected to little wear and tear. The use of the separator for ordinary and lean coal permitted an increase in mill productivity and a reduction in power consumption. B.F.A.